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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

William A. Baker

Serial No. 10/051,602

Filed: January 17, 2002

For: EXERCISE BICYCLE

Examiner:

Art Unit: 3764

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TECHNOLOGY CENTER P3700

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, DC 20231

Sir:

Applicant respectfully requests that Examiner enter the following amendments in the application serial number 10/051,602:

In the Drawings:

Please see attached red-lined drawings showing corrections to add, delete, and replace various reference numbers and associated lead lines on sheets 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10. The requested corrections simply further identify the elements of the drawings originally submitted in the application and do not represent new matter.

In the Specification:

Please delete the paragraph on page 6, beginning at line 4, and replace it with the following:

Fig. 4 is a perspective view of one embodiment of the frame of the exercise bicycle illustrated in Figs. 2 and 3. In Fig. 4, the frame is shown by itself, with various components of the exercise bicycle removed, such as the handlebar assembly, the pedal assembly, the seat assembly, and the flywheel. Referring to Figs. 1-4, the frame 20 is supported on the floor or any

other suitable surface at a rear base 43 and a front base 44. The rear base 43 and the front base 44 extend laterally with respect to the length of the exercise bicycle 20 to provide lateral support when side-to-side forces are applied to the exercise bicycle, such as when standing on the pedals and pedaling vigorously and when mounting or dismounting the exercise bicycle. In one example, a rear laterally extending partially curved plate 46 is connected with the rear portion of the monoframe structure 23 and is secured with the rear base 43, and a front laterally extending partially curved plate 48 is connected with the bottom of the front forks 26 and the front of the bottom tube 42 and is secured to the front base 44.

Please delete the paragraph on page 6, beginning at line 17, and replace it with the following:

As best shown in Fig. 3, adjustable floor stands 50 extend downwardly from the bottom outside portions of the rear base 43 and the front base 44 to level the exercise bicycle 20 in the event the exercise bicycle is used on a sloped or uneven surface. In addition, one or more wheels 52 are connected with the front of the front base 44 to allow a user to conveniently move the exercise bicycle. In one example, a left and a right wheel are each rotatably supported on a corresponding left and right brackets that are connected proximate the left and right side of the base, respectively, and extend forwardly and somewhat upwardly from the front base. The bracket is oriented somewhat upwardly so that the exercise bicycle may be pivoted from the rear upwardly and forwardly to cause the wheels to move downwardly and engage the floor, from which position the exercise bicycle may be rolled along the floor to a different location. Alternatively, one wheel may be rotatably supported at the front of the front base rather than two wheels.

Please delete the paragraph on page 8, beginning at line 5, and replace it with the following:

From the rear support 60, the monoframe structure defines a forwardly sweeping aesthetically pleasing shape that widens into a central monoframe portion 66. The monoframe has a generally curved (convex) top surface and a generally curved (concave) bottom surface.

An upper or top support structure 68 extends forwardly and upwardly from the upper forward portion of the central monoframe portion 66, a lower or bottom support structure 70 extends forwardly and downwardly from the lower front portion of the central monoframe portion 66, and a seat support structure 72 extends upwardly from the upper portion of the central monoframe 66 between the rear support 60 and the top support 68. In the embodiments of the invention discussed herein, the arcuate surfaces of the monoframe provide aesthetically pleasing lines of the frame generally. In addition, the smooth sweeping curves of the monoframe reduce stress risers and can be adjusted to provide any number of aesthetically pleasing shapes without impacting the strength of the monoframe structure.

Please delete the paragraph on page 8, beginning at line 19, and replace it with the following:

The front of the top support structure 68 of the monoframe 23 is connected to the head tube 30 adjacent the top of the front forks 26. In the embodiment illustrated in Figs. 1-4, the vertical dimension of the top support structure 68 generally narrows as it sweeps forwardly and upwardly from the central monoframe portion 66 to the head tube 30. The top support structure 68 defines an upper surface and a lower surface. The upper surface of the top support is generally curved (convex) along its length from rear to front between the central monoframe portion 66 and the front forks 26, while the lower surface of the top support is generally curved (concave) along its length from rear to front. The upper surface of the top support 68 maintains the continuity of the forwardly sweeping shape of the monoframe that begins at the rear support 60.

Please delete the paragraph on page 10, beginning at line 32, and replace it with the following:

Referring to Fig. 5, an embodiment of the invention with the seat tube 34 connected to the bottom tube 42 within the hollow space defined by the two side panels 54 and 56 is shown. The bottom tube 42 is welded to the lower portion of the seat tube 34 to impart additional strength and rigidity to the frame 20. Alternatively or additionally, the seat tube 34 and bottom

tube 42 may be welded to the inside of one of the side panels 54 and 56 of the monoframe, welded to the rim of the seat tube aperture 80 or the bottom tube aperture 76 respectively, or some combination of welds to secure the seat tube 34 and bottom tube 42 to the monoframe.

Please delete the paragraph on page 11, beginning at line 14, and replace it with the following:

As best shown in Figs. 2 and 4, at the front of the frame, the front fork 26 extends between the front support plate 48 and the forward portion of the top support 68. The front fork 26 includes a left fork leg and a right fork leg, each extending upwardly from the front support and defining a space in which the flywheel is located as shown in Figs. 1 and 2. A left receiving bracket 82 and a right receiving bracket 84 are positioned on the inside surface of each of the fork legs for securing opposing ends of an axle of the flywheel 28. When positioned in the receiving brackets the flywheel 28 is located between the front fork legs. The portion of the flywheel 28 generally rearward of the axle occupies the space defined by the rearwardly extending curved face of the central monoframe 66 bordered by the lower surface of the top portion 68 and the upper surface of the bottom support 70. The flywheel 28 includes a flywheel sprocket circumferentially disposed about the axle on the right side of the flywheel and configured to receive a chain. In addition, the flywheel may include a freewheel clutch mechanism, such as is shown in U.S. Patent No. 5,961,424 entitled "Free Wheel Clutch Mechanism for Bicycle Drive Train" and related patent application no. 09/803,630, filed 3-9-01 entitled "Free Wheel Clutch Mechanism for Bicycle Drive Train" which are both hereby incorporated by reference in their entirety. The freewheel clutch mechanism disengages the rotation of the flywheel from the rotation of the pedal assembly and drive train when the user impacts a force on the pedals contrary to the rotation of the flywheel, and that force is sufficient to overcome a break-free force of the free wheel clutch mechanism.

Please delete the paragraph on page 13, beginning at line 18, and replace it with the following:

Referring to Fig. 6B, an adjustment knob 128 is rotatably supported on a mounting bracket 130 connected with the head tube 30. The adjustment knob 128 includes a downwardly extending threaded post 132 adapted to engage a plate 134 supporting the brake cable 123 and defining a threaded aperture adapted to cooperate with the threaded post 132. Rotation of the knob 128 in a clockwise direction draws the plate 134 upwardly and accordingly draws the brake cable 123 upwardly, and rotating the knob 128 in a counter clockwise direction moves the plate 134 downwardly and hence relaxes the brake cable 123. Drawing the brake cable 123 upwardly causes the ends of the generally horizontal arms 120 and 122 connected with the brake cable 123 to move upwardly and thereby brings the brake pads 118 into engagement with the flywheel 28. The brake assembly also includes one or more springs biased so that relaxing of the brake cables causes the brake arms to move away from engagement with the flywheel 28.

Please delete the paragraph on page 15, beginning at line 15, and replace it with the following:

The pop pin 152 is operably connected with the front wall 158 of the head tube 30. A boss 170 extends forwardly from the front wall 158 of the head tube 30 and defines a threaded aperture 172 for receiving a threaded sleeve 174. The sleeve 174 is cylindrical with the outer surface being threaded and adapted to threadably engage the threaded aperture 172 defined by the boss 170. The inner portion of the sleeve 174 is partially threaded, adjacent its front portion and is adapted to receive the pop pin 152. The pop pin 152 is milled at one end, opposite a handle 176, to define an engaging cylinder 178 and a collar 180. The engaging cylinder 178 is adapted to insert into one of the apertures 150 along the front wall 158 of the handlebar stem 142. The sleeve 174 is connected with the tightening bolt 152 by a spring 182 biased to insert the engaging cylinder 178 into one of the plurality of apertures 150 in the handlebar stem 142.

Please delete the paragraph on page 18, beginning at line 5, and replace it with the following:

A seat post insert 206, in one example, is fit between the seat tube 34 and the seat post 190. The seat tube insert 206 defines a flange 208 along its upper rim configured to rest on the top rim of the seat tube 34. A single large aperture 207 is defined along the front wall of the insert which aligns with the seat tube pop pin 192. The aperture is sized to receive both the engagement pin and the collar of the pop pin. A lateral tube insert 212, in one example, is also fit between the lateral tube 196 and the lateral post 200. The lateral insert 212 defines a flange 213 along its rear rim configured to engage the rear rim of the lateral tube. A single large aperture is defined along the lower wall of the insert which aligns with the seat pop pin 204. As with the other inserts, the aperture is sized to receive the engagement pin and the collar of the pop pin.

Please delete the paragraph on page 18, beginning at line 16, and replace it with the following:

In one example, the seat tube 34 and the seat post 190, and the lateral tube 196 and the lateral post 200 use interengaging trapezoidal tubing structure described above to facilitate wedge engagement like the head tube 30 and handlebar stem 142 described earlier. As shown in Fig. 4, a front wall 215 of the seat tube is wider than a rear wall 217 of the seat tube, forming a trapezoid. A left 219 and a right 221 sidewall of the seat tube 34 converge toward each other between the outer edges of the front wall and the outer edges of the rear wall to define a trapezoidal aperture. The seat post 190 includes trapezoidal tubing adapted to fit within the trapezoidal aperture defined by the seat tube 34. In one example, the front wall of the seat post 190 is wider than the rear wall of the seat post, and the sidewalls taper inwardly between the outside edges of the front wall and the outside edges of the rear wall.

Please delete the paragraph on page 18, beginning at line 27, and replace it with the following:

The seat post 190, in one example, is configured to be wedged rearwardly in the seat tube 34. The seat tube pop pin 192 is substantially similar to the pop pin 152 described as the head tube 30 and related structure and operation as shown in Figs. 7A, 7B, 8A, and 8B. The engaging

pin is adapted to engage one of the apertures 194 on the front wall of the seat post 190 to vertically position the seat. The spring is biased to push the engaging pin into one of the apertures. Biased in such a manner, the pop pin snaps into whatever apertures it is aligned with when the user is not pulling outward on the handle. Again, the operation of the interengaging trapezoidal seat tube 34 and seat post 190 work with the pop pin structure 192 identically to that shown in Figs. 7A, 7B, 8A, and 8B.

Please delete the paragraph on page 19, beginning at line 4, and replace it with the following:

Referring to Fig. 3, the lateral seat tube 196 extends rearwardly from the seat post 190 and is positioned generally horizontal when the seat post 190 is mounted within the seat tube 34. In one example, the seat mounting tube 196 includes a lower wall 223 having a greater width than an upper wall 225, and with a left side wall 227 and right sidewall 229 tapering upwardly from the outer edges of the lower wall to the outer edges of the upper wall to define a trapezoidal aperture 198 adapted to receive the lateral seat post 200.

Please delete the paragraph on page 19, beginning at line 11, and replace it with the following:

The lateral seat post 200 is generally trapezoidal with an upper wall 230, a lower wall 232, and sidewalls 234 adapted to cooperate with the trapezoidal aperture defined by the lateral seat tube. In one example, when the lateral seat post 200 is loosely positioned within the seat mounting tube 196, there is an upper gap between the upper wall of the lateral seat mounting tube 196 and the upper wall of the lateral seat assembly post 200, and the lower wall of the lateral seat post 200 rests on the lower wall of the seat mounting tube 196.

Please delete the paragraph on page 19, beginning at line 18, and replace it with the following:

The pop pin 204 extends downwardly from the rear portion of the lower wall of the lateral tube 196, and is housed in a boss 236 with a sleeve substantially similar or described with

reference to the head tube 30. The lateral seat post 200 may be adjusted forwardly or rearwardly by moving it forwardly or rearwardly within the lateral seat tube 196 and fixing the seat assembly post in a desired position with the pop pin 204. The pop pin 204 is biased to draw the engaging pin into one of the apertures in the bottom of the lateral seat post 200. The pop pin 204 may then be tightened to force the collar upwardly against the bottom wall of the lateral seat post 200 and wedge the lateral seat post 200 upwardly between the sidewalls of the seat mounting tube 196. As the lateral seat post 200 is wedged upwardly, the upper gap closes and a lower gap opens, until the left and right side walls 234 of the lateral seat post firmly engage the left 227 and right 229 sidewalls of the lateral seat tube 196. In this manner, at least two sidewalls of the lateral seat post positively engage at least two sidewalls of the lateral seat tube. The tubes may also be configured so that the upper wall 230 of the seat assembly post 200 positively engages the upper wall 225 of the seat mounting tube 198 thereby providing three walls of positive engagement.

Please delete the paragraph on page 20, beginning at line 1, and replace it with the following:

An alternative embodiment of the seat assembly 36' is shown in Fig. 9. In this example, the lateral seat tube 196' includes a lower wall 223' having a lesser width than the upper wall 225', and with a left side wall 227' and a right sidewall 229' tapering downwardly from the outer edges of the upper wall to the outer edges of the lower wall to define a elongate trapezoidal aperture adapted to receive the lateral seat post 200'. The lateral seat post 200' is also rearranged so that the upper wall 230' of the lateral seat post is wider than the lower wall 232', and the sidewalls 234' taper downwardly from the outside edges of the upper wall to the outside edges of the lower wall. The lateral seat post 200' defines a plurality of apertures 239 along its upper wall 230'.

Please delete the paragraph on page 20, beginning at line 10, and replace it with the following:

The pop pin boss 236', in this embodiment, extends upwardly from the rear portion of the upper wall 225' and defines a threaded aperture that extends through the upper wall and is adapted to receive the sleeve. In this embodiment, when the pop pin 204' is tightened within the sleeve, it engages the upper wall 230' of the lateral seat post 200' and wedges the seat post downwardly within the lateral seat tube 196'. As the lateral seat post 200' is wedged downwardly, the left and right sidewalls 234' of the lateral seat post 200' firmly engage the left and right sidewalls (227', 229') of the lateral seat tube 196'. As with the first embodiment, at least two sidewalls of the lateral seat post positively engage at least two sidewalls of the lateral seat tube. The tubes may also be configured so that the lower wall 232' of the seat assembly post positively engages the lower wall 223' of the seat mounting tube thereby providing three walls of positive engagement. Again, in this embodiment, the pop pin and trapezoidal structure and operation are identical to that shown in Figs. 7A, 7B, 8A, and 8B.

REMARKS

Eleven (11) sheets of formal drawings are submitted herewith for your consideration and approval.

The requested amendments to the specification and the drawings are submitted to correct informalities discovered upon final review of the formal drawings. The requested corrections simply further identify the elements of the drawings originally submitted in the application.

Please note that formal red-lined copies of sheets 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 indicating the proposed corrections to Figs. 1, 2, 3, 4, 5A, 5B, 6A, 6B, 6C, 7A, 7B, 8A, 8B, and 9 are also enclosed for the Examiner's convenience.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made." No new matter is presented by this Amendment. Accordingly, the Applicant believes this Amendment is in proper form for entry.

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No fees are believed due with this Amendment, however, if any fees are required, please charge deposit account 04-1415. If there are any questions regarding the above, please contact the undersigned.

Signed at Denver, Colorado, this 14th day of June, 2002.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gregory P. Durbin", is written over a horizontal line.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

The paragraph on page 6, beginning at line 4 has been amended as follows:

Fig. 4 is a perspective view of one embodiment of the frame of the exercise bicycle illustrated in Figs. 2 and 3. In Fig. 4, the frame is shown by itself, with various components of the exercise bicycle removed, such as the handlebar assembly, the pedal assembly, the seat assembly, and the flywheel. Referring to Figs. 1-4, the frame 20 is supported on the floor or any other suitable surface at a rear base [42] 43 and a front base 44. The rear base [42] 43 and the front base 44 extend laterally with respect to the length of the exercise bicycle 20 to provide lateral support when side-to-side forces are applied to the exercise bicycle, such as when standing on the pedals and pedaling vigorously and when mounting or dismounting the exercise bicycle. In one example, a rear laterally extending partially curved plate 46 is connected with the rear portion of the monoframe structure 23 and is secured with the rear base [42] 43, and a front laterally extending partially curved plate 48 is connected with the bottom of the front forks 26 and the front of the bottom tube 42 and is secured to the front base 44.

The paragraph on page 6, beginning at line 17 has been amended as follows:

As best shown in Fig. 3, adjustable floor stands 50 extend downwardly from the bottom outside portions of the rear base [42] 43 and the front base 44 to level the exercise bicycle 20 in the event the exercise bicycle is used on a sloped or uneven surface. In addition, one or more wheels 52 are connected with the front of the front base 44 to allow a user to conveniently move the exercise bicycle. In one example, a left and a right wheel are each rotatably supported on a corresponding left and right brackets that are connected proximate the left and right side of the base, respectively, and extend forwardly and somewhat upwardly from the front base. The bracket is oriented somewhat upwardly so that the exercise bicycle may be pivoted from the rear upwardly and forwardly to cause the wheels to move downwardly and engage the floor, from which position the exercise bicycle may be rolled along the floor to a different location.

Alternatively, one wheel may be rotatably supported at the front of the front base rather than two wheels.

The paragraph on page 8, beginning at line 5 has been amended as follows:

From the rear support 60, the monoframe structure defines a forwardly sweeping aesthetically pleasing shape that widens into a central monoframe portion 66. The monoframe has a generally curved (convex) top surface and a generally curved (concave) bottom surface. An upper or top support structure 68 extends forwardly and upwardly from the upper forward portion of the central monoframe portion 66, a lower or bottom support structure 70 extends forwardly and downwardly from the lower front portion of the central monoframe portion [68] 66, and a seat support structure 72 extends upwardly from the upper portion of the central monoframe [68] 66 between the rear support 60 and the top support 68. In the embodiments of the invention discussed herein, the arcuate surfaces of the monoframe provide aesthetically pleasing lines of the frame generally. In addition, the smooth sweeping curves of the monoframe reduce stress risers and can be adjusted to provide any number of aesthetically pleasing shapes without impacting the strength of the monoframe structure.

The paragraph on page 8, beginning at line 19 has been amended as follows:

The front of the top support structure 68 of the monoframe 23 is connected to the head tube 30 adjacent the top of the front forks 26. In the embodiment illustrated in Figs. 1-4, the vertical dimension of the top support structure 68 generally narrows as it sweeps forwardly and upwardly from the central monoframe portion 66 to the head tube 30. The top support structure 68 defines an upper surface and a lower surface. The upper surface of the top support is generally curved (convex) along its length from rear to front between the central monoframe portion 66 and the front forks 26, while the lower surface of the top support is generally curved (concave) along its length from rear to front. The upper surface of the top support 68 maintains [68] the continuity of the forwardly sweeping shape of the monoframe that begins at the rear support 60.

The paragraph on page 10, beginning at line 32 has been amended as follows:

Referring to Fig. 5, an embodiment of the invention with the seat tube 34 connected to the bottom tube 42 within the hollow space defined by the two side panels 54 and 56 is shown. The bottom tube 42 is welded to the lower portion of the seat tube 34 to impart additional strength and rigidity to the frame 20. Alternatively or additionally, the seat tube 34 and bottom tube 42 may be welded to the inside of one of the side panels 54 and 56 of the monoframe, welded to the rim of the seat tube aperture [90] 80 or the bottom tube aperture 76 respectively, or some combination of welds to secure the seat tube 34 and bottom tube 42 to the monoframe.

The paragraph on page 11, beginning at line 14 has been amended as follows:

As best shown in Figs. 2 and 4, at the front of the frame, the front fork 26 extends between the front support plate 48 and the forward portion [68] of the top support 68. The front fork 26 includes a left fork leg and a right fork leg, each extending upwardly from the front support and defining a space in which the flywheel is located as shown in Figs. 1 and 2. A left receiving bracket 82 and a right receiving bracket 84 are positioned on the inside surface of each of the fork legs for securing opposing ends of an axle of the flywheel 28. When positioned in the receiving brackets the flywheel 28 is located between the front fork legs. The portion of the flywheel 28 generally rearward of the axle occupies the space defined by the rearwardly extending curved face of the central monoframe 66 bordered by the lower surface of the top portion 68 and the upper surface of the bottom support 70. The flywheel 28 includes a flywheel sprocket circumferentially disposed about the axle on the right side of the flywheel and configured to receive a chain. In addition, the flywheel may include a freewheel clutch mechanism, such as is shown in U.S. Patent No. 5,961,424 entitled "Free Wheel Clutch Mechanism for Bicycle Drive Train" and related patent application no. 09/803,630, filed 3-9-01 entitled "Free Wheel Clutch Mechanism for Bicycle Drive Train" which are both hereby incorporated by reference in their entirety. The freewheel clutch mechanism disengages the rotation of the flywheel from the rotation of the pedal assembly and drive train when the user

impacts a force on the pedals contrary to the rotation of the flywheel, and that force is sufficient to overcome a break-free force of the free wheel clutch mechanism.

The paragraph on page 13, beginning at line 18 has been amended as follows:

Referring to Fig. [6A] 6B, an adjustment knob 128 is rotatably supported on a mounting bracket 130 connected with the head tube 30. The adjustment knob 128 includes a downwardly extending threaded post 132 adapted to engage a plate 134 supporting the brake cable 123 and defining a threaded aperture adapted to cooperate with the threaded post 132. Rotation of the knob 128 in a clockwise direction draws the plate 134 upwardly and accordingly draws the brake cable 123 upwardly, and rotating the knob 128 in a counter clockwise direction moves the plate 134 [downwardly] downwardly and hence relaxes the brake cable 123. Drawing the brake cable 123 upwardly causes the ends of the generally horizontal arms 120 and 122 connected with the brake cable 123 to move upwardly and thereby brings the brake pads 118 into engagement with the flywheel 28. The brake assembly also includes one or more springs biased so that relaxing of the brake cables causes the brake arms to move away from engagement with the flywheel 28.

The paragraph on page 15, beginning at line 15 has been amended as follows:

The pop pin 152 is operably connected with the front wall 158 of the head tube 30. A boss 170 extends forwardly from the front wall 158 [to] of the head tube 30 and defines a threaded aperture 172 for receiving a threaded sleeve 174. The sleeve 174 is cylindrical with the outer surface being threaded and adapted to threadably engage the threaded aperture 172 defined by the boss 170. The inner portion of the sleeve 174 is partially threaded, adjacent its front portion and is adapted to receive the pop pin 152. The pop pin 152 is milled at one end, opposite a handle 176, to define an engaging cylinder 178 and a collar 180. The engaging cylinder 178 is adapted to insert into one of the apertures 150 along the front wall 158 of the handlebar stem 142. The sleeve 174 is connected with the tightening bolt [176] 152 by a spring 182 biased to insert the engaging cylinder 178 into one of the plurality of apertures 150 in the handlebar stem 142.

The paragraph on page 18, beginning at line 5 has been amended as follows:

A seat post insert 206, in one example, is fit between the seat tube 34 and the seat post 190. The seat tube insert 206 defines a flange 208 along its upper rim configured to rest on the top rim of the seat tube 34. A single large aperture 207 is defined along the front wall of the insert which aligns with the seat tube pop pin 192. The aperture is sized to receive both the engagement pin and the collar of the pop pin. A lateral tube insert 212, in one example, is also fit between the lateral tube 196 and the lateral post 200. The lateral insert 212 defines a flange 213 along its rear rim configured to engage the rear rim of the lateral tube. A single large aperture is defined along the lower wall of the insert which aligns with the seat pop pin 204. As with the other inserts, the aperture is sized to receive the engagement pin and the collar of the pop pin.

The paragraph on page 18, beginning at line 16 has been amended as follows:

In one example, the seat tube 34 and the seat post 190, and the lateral tube 196 and the lateral post 200 use interengaging trapezoidal tubing structure described above to facilitate wedge engagement like the head tube 30 and handlebar stem 142 described earlier. As shown in Fig. 4, a front wall 215 of the seat tube is wider than a rear wall 217 of the seat tube, forming a trapezoid. A left 219 and a right 221 sidewall of the seat tube 34 converge toward each other between the outer edges of the front wall and the outer edges of the rear wall to define a trapezoidal aperture. The seat post 190 includes trapezoidal tubing adapted to fit within the trapezoidal aperture defined by the seat tube 34. In one example, the front wall of the seat post 190 is wider than the rear wall of the seat post, and the sidewalls taper inwardly between the outside edges of the front wall and the outside edges of the rear wall.

The paragraph on page 18, beginning at line 27 has been amended as follows:

The seat post 190, in one example, is configured to be wedged rearwardly in the seat tube 34. The seat tube pop pin 192 is substantially similar to the pop pin 152 described as the head tube 30 and related structure and operation as shown in Figs. 7A, 7B, 8A, and 8B. The engaging

pin is adapted to engage one of the apertures 194 on the front wall of the seat post 190 to vertically position the seat. The spring is biased to push the engaging pin into one of the apertures. Biased in such a manner, the pop pin snaps into whatever apertures it is aligned with when the user is not pulling outward on the handle. Again, the operation of the interengaging trapezoidal seat tube 34 and seat post 190 work with the pop pin structure 192 identically to that shown in Figs. 7A, 7B, 8A, and 8B.

The paragraph on page 19, beginning at line 4 has been amended as follows:

Referring to Fig. [4] 3, the lateral seat tube 196 extends rearwardly from the seat post 190 and is positioned generally horizontal when the seat post 190 is mounted within the seat tube 34. In one example, the seat mounting tube 196 includes a lower wall 223 having a greater width than [a] an upper wall 225, and with a left side wall 227 and right sidewall 229 tapering upwardly from the outer edges of the lower wall to the outer edges of the upper wall to define a trapezoidal aperture 198 adapted to receive the lateral seat post 200.

The paragraph on page 19, beginning at line 11 has been amended as follows:

The lateral seat post 200 is generally trapezoidal with an upper wall 230, a lower wall 232, and sidewalls 234 adapted to cooperate with the trapezoidal aperture defined by the lateral seat tube. In one example, when the lateral seat post 200 is loosely positioned within the seat mounting tube 196, there is [a] an upper gap between the upper wall of the lateral seat mounting tube 196 and the upper wall of the lateral seat assembly post 200, and the lower wall of the lateral seat post 200 rests on the lower wall of the seat mounting tube 196.

The paragraph on page 19, beginning at line 18 has been amended as follows:

The pop pin 204 extends downwardly from the rear portion of the lower wall of the lateral tube 196, and is housed in a boss 236 with a sleeve substantially similar or described with reference to the head tube 30. The lateral seat post 200 may be adjusted forwardly or rearwardly by moving it forwardly or rearwardly within the lateral seat tube 196 and fixing the seat assembly post in a desired position with the pop pin 204. The pop pin 204 is biased to draw the

engaging pin into one of the apertures in the bottom of the lateral seat post 200. The pop pin 204 may then be tightened to force the collar upwardly against the bottom wall of the lateral seat post 200 and wedge the lateral seat post 200 upwardly between the sidewalls of the seat mounting tube 196. As the lateral seat post 200 is wedged upwardly, the upper gap closes and a lower gap opens, until the left and right side walls 234 of the lateral seat post firmly engage the left 227 and right 229 sidewalls of the lateral seat tube 196. In this manner, at least two sidewalls of the lateral seat post positively engage at least two sidewalls of the lateral seat tube. The tubes may also be configured so that the upper wall 230 of the seat assembly post 200 positively engages the upper wall 225 of the seat mounting tube 198 thereby providing three walls of positive engagement.

The paragraph on page 20, beginning at line 1 has been amended as follows:

An alternative embodiment of the seat assembly 36' is shown in Fig. 9. In this example, the lateral seat tube 196' includes a lower wall 223' having a lesser width than the upper wall 225', and with a left side wall 227' and a right sidewall 229' tapering downwardly from the outer edges of the upper wall to the outer edges of the lower wall to define a elongate trapezoidal aperture adapted to receive the lateral seat post 200'. The lateral seat post 200' is also rearranged so that the upper wall 230' of the lateral seat post is wider than the lower wall 232', and the sidewalls 234' taper downwardly from the outside edges of the upper wall to the outside edges of the lower wall. The lateral seat post 200' defines a plurality of apertures 239 along its upper wall 230'.

The paragraph on page 20, beginning at line 10 has been amended as follows:

The pop pin boss 236', in this embodiment, extends upwardly from the rear portion of the upper wall 225' and defines a threaded aperture that extends through the upper wall and is adapted to receive the sleeve. In this embodiment, when the pop pin 204' is tightened within the sleeve, it engages the upper wall 230' of the lateral seat post 200' and wedges the seat post downwardly within the lateral seat tube 196'. As the lateral seat post 200' is wedged downwardly, the left and right sidewalls 234' of the lateral seat post 200' firmly engage the left

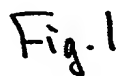
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and right sidewalls (227', 229') of the lateral seat tube 196'. As with the first embodiment, at least two sidewalls of the lateral seat post positively engage at least two sidewalls of the lateral seat tube. The tubes may also be configured so that the lower wall 232' of the seat assembly post positively engages the lower wall 223' of the seat mounting tube thereby providing three walls of positive engagement. Again, in this embodiment, the pop pin and trapezoidal structure and operation are identical to that shown in Figs. 7A, 7B, 8A, and 8B.

[END OF DOCUMENT]

1/11



2(11)

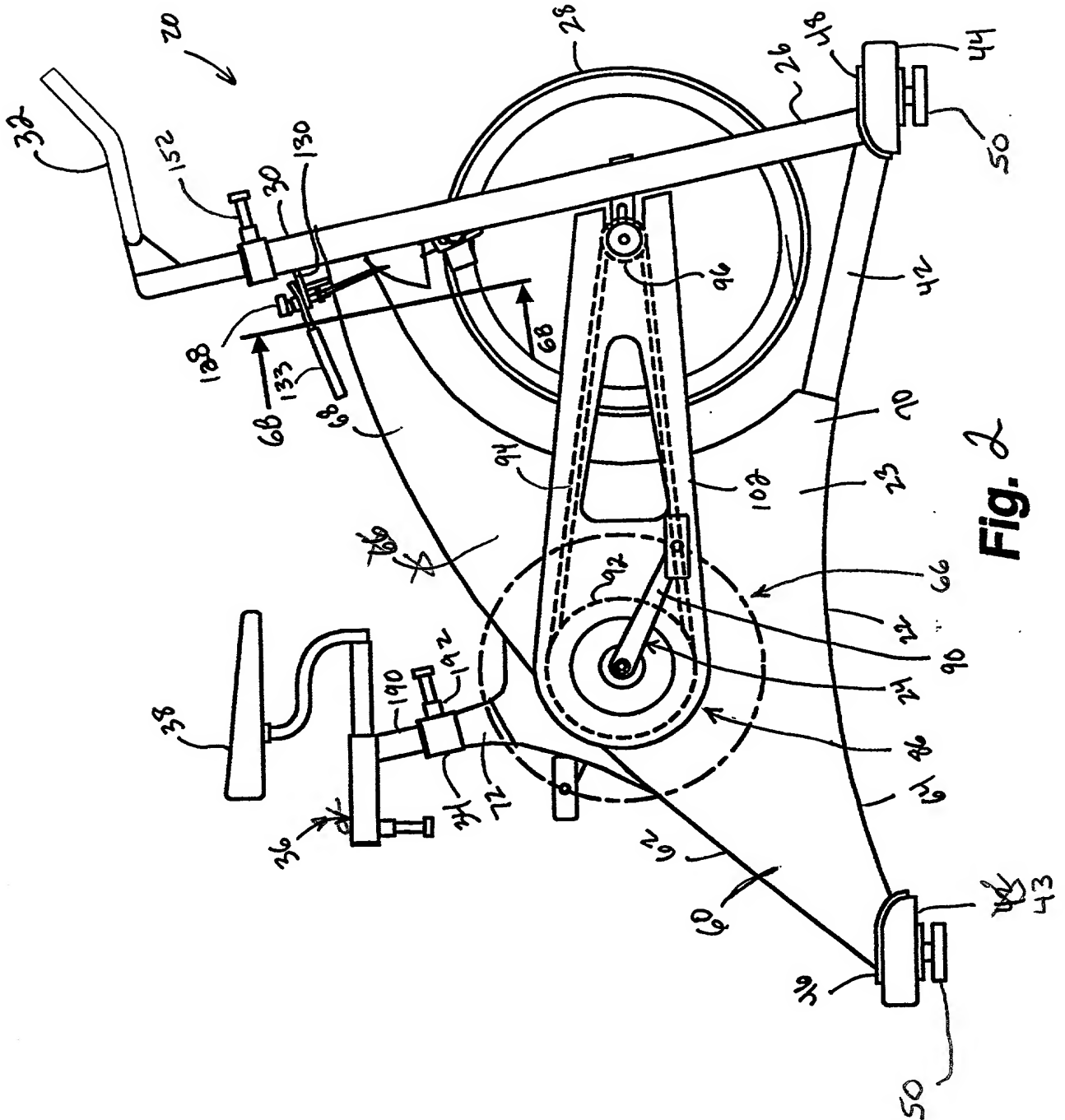


Fig. 2

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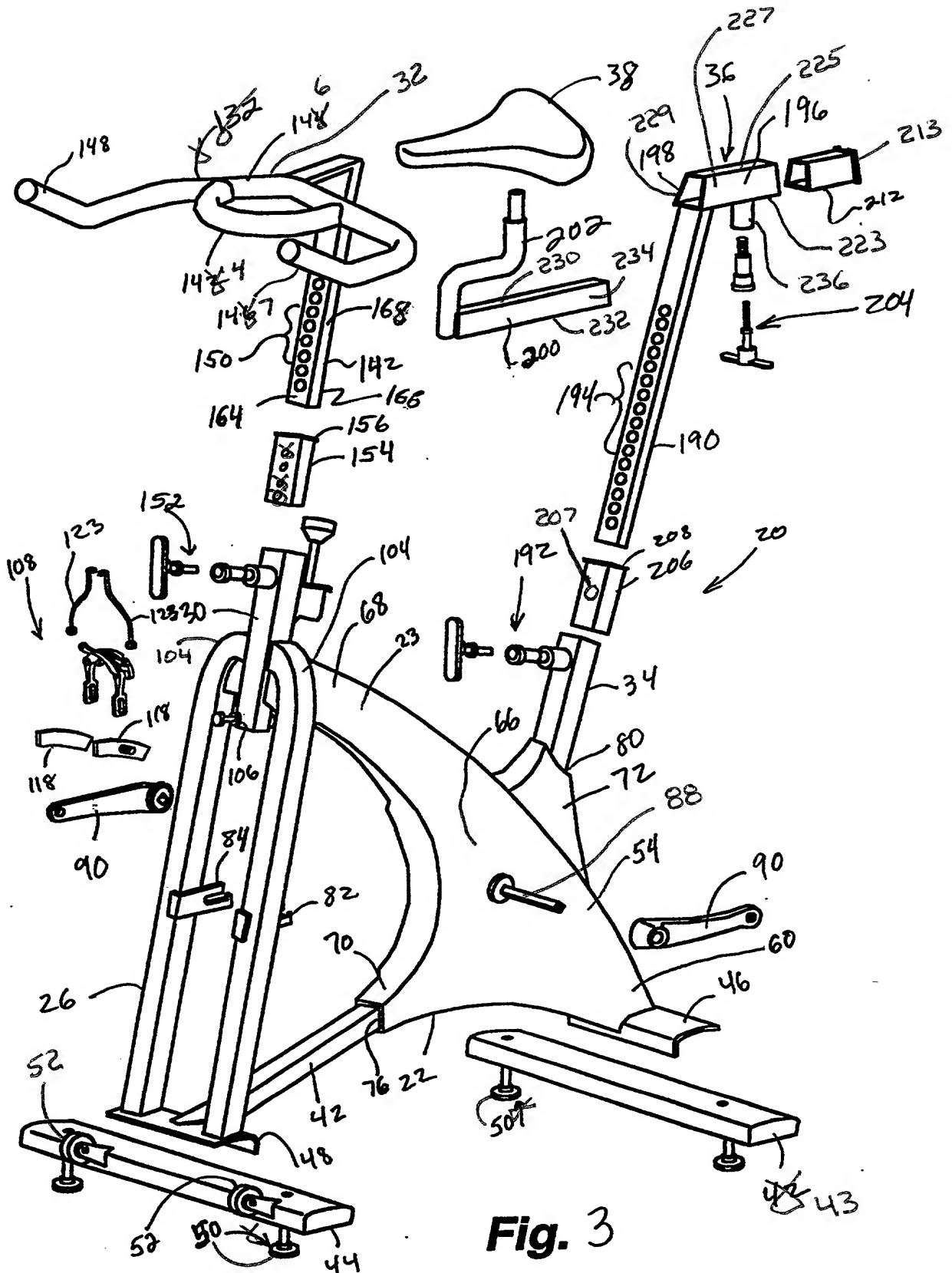


Fig. 3





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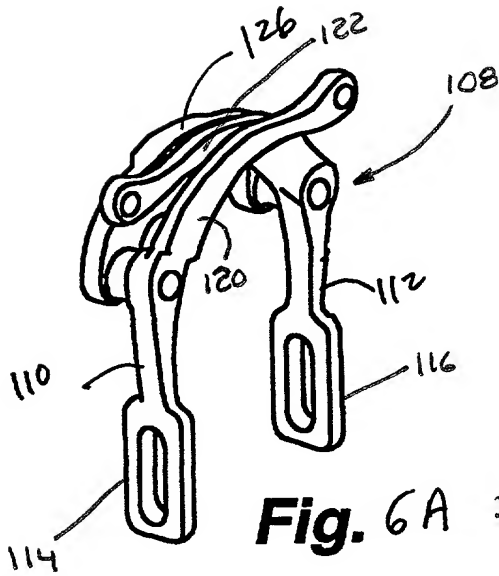


Fig. 6A

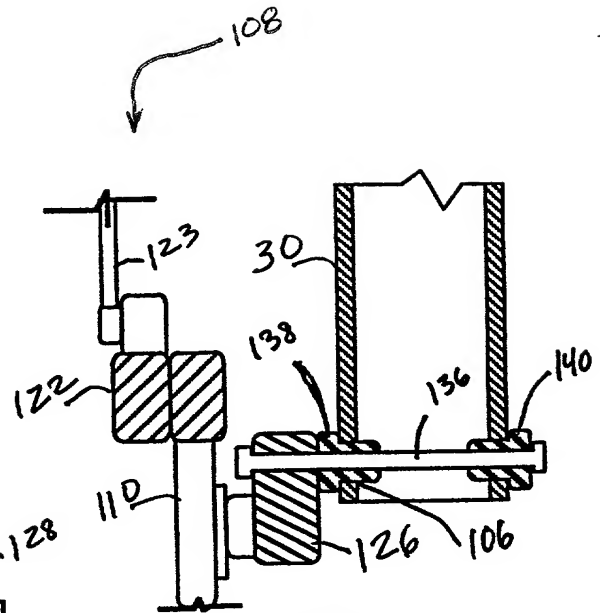


Fig. 6C

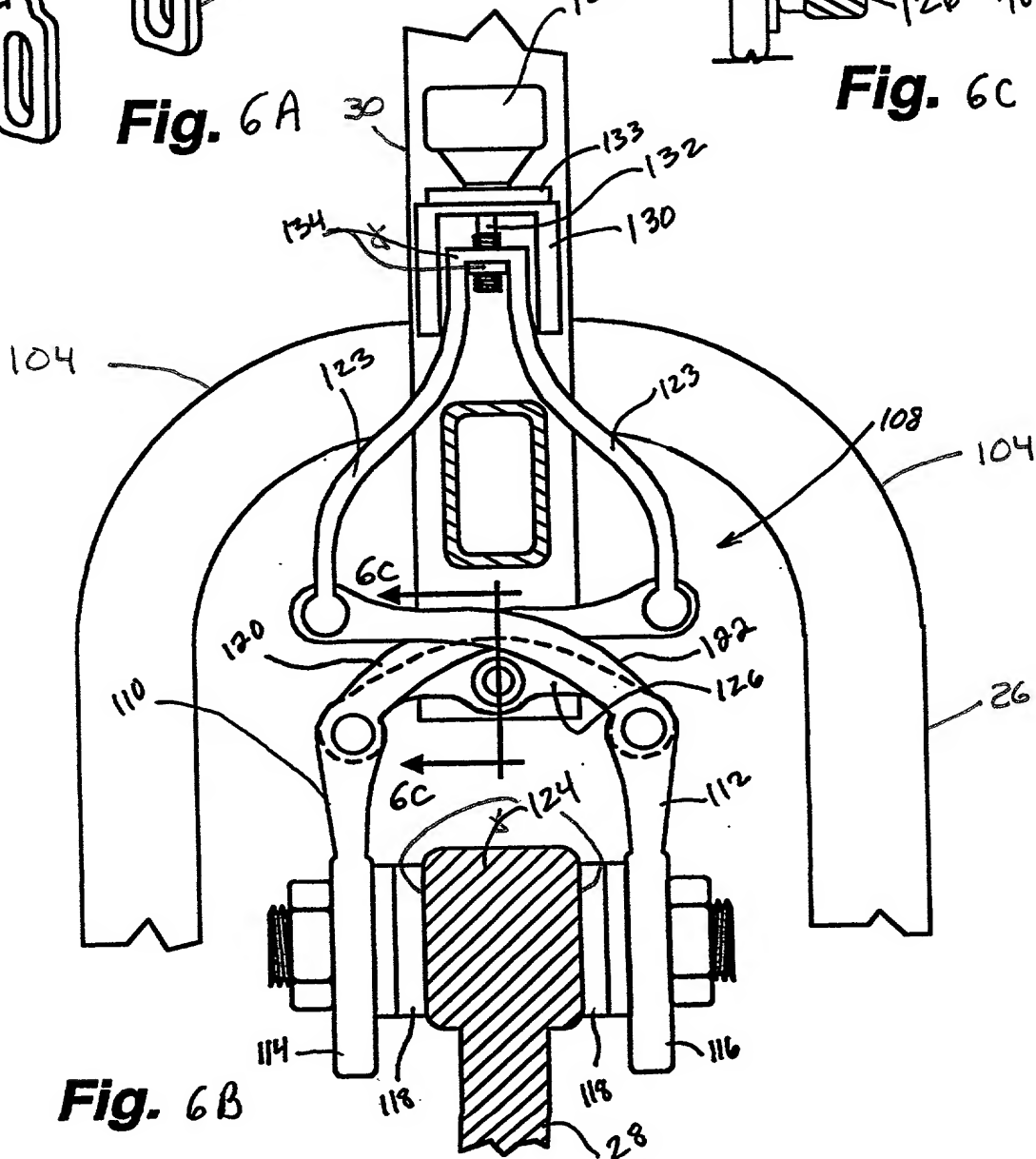


Fig. 6B

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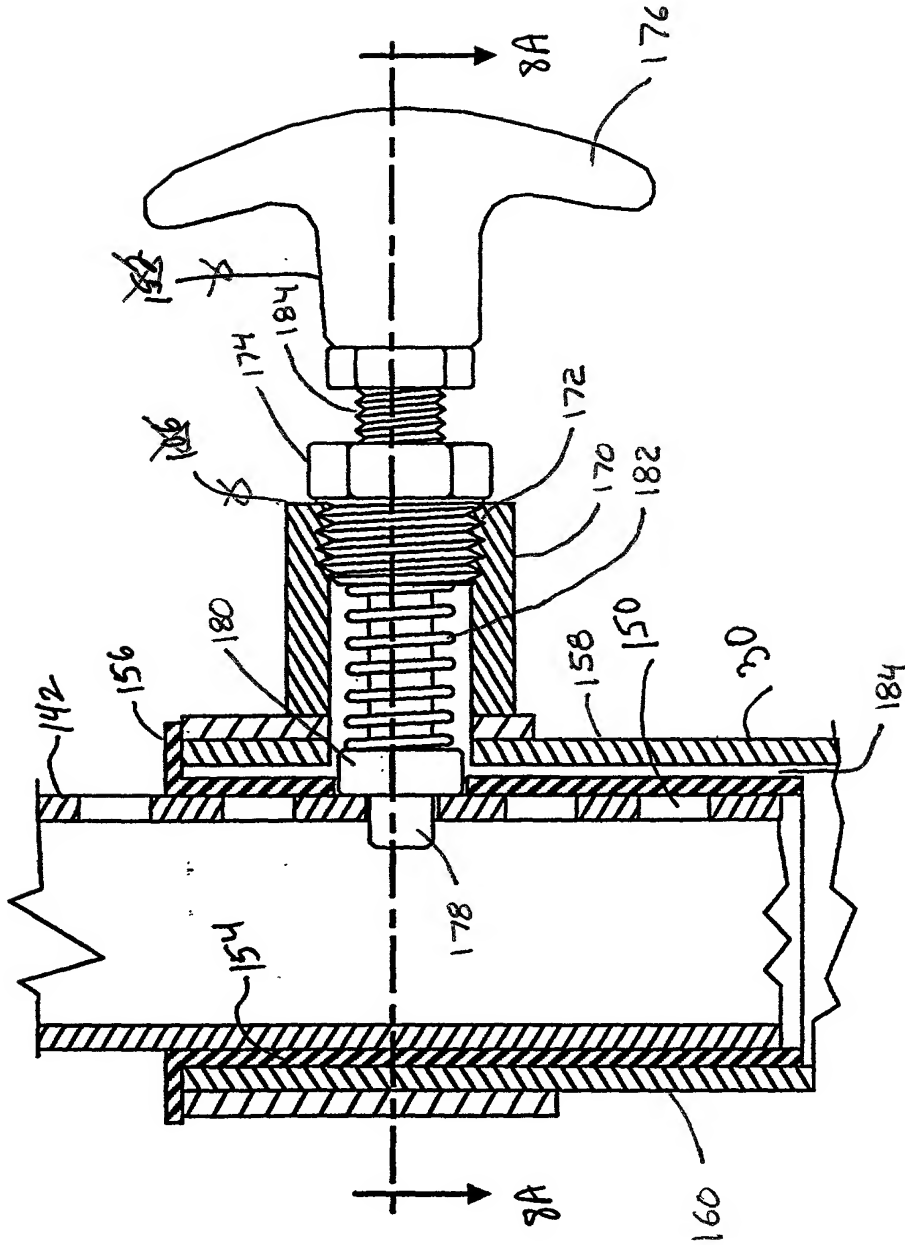
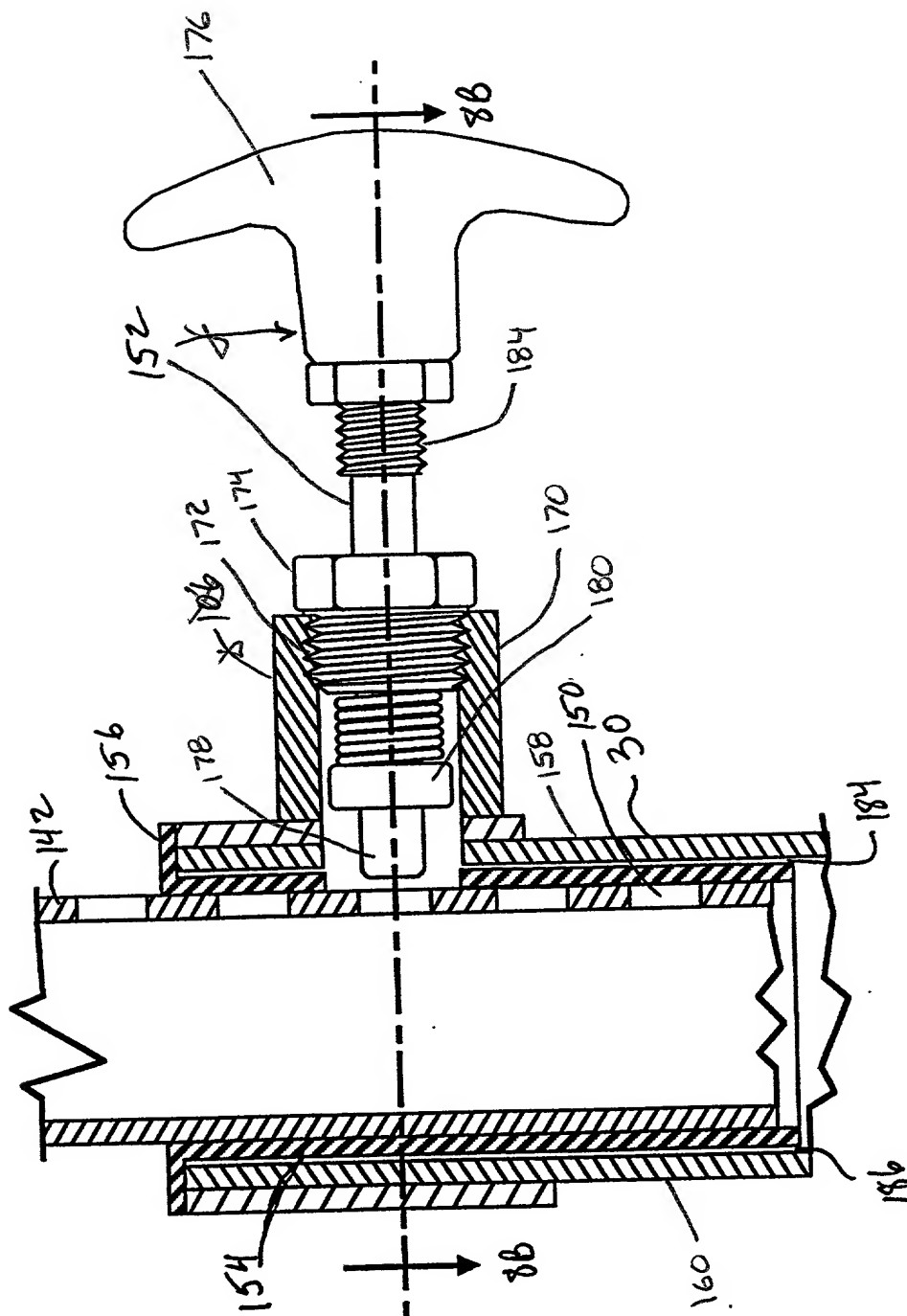


Fig. 7A



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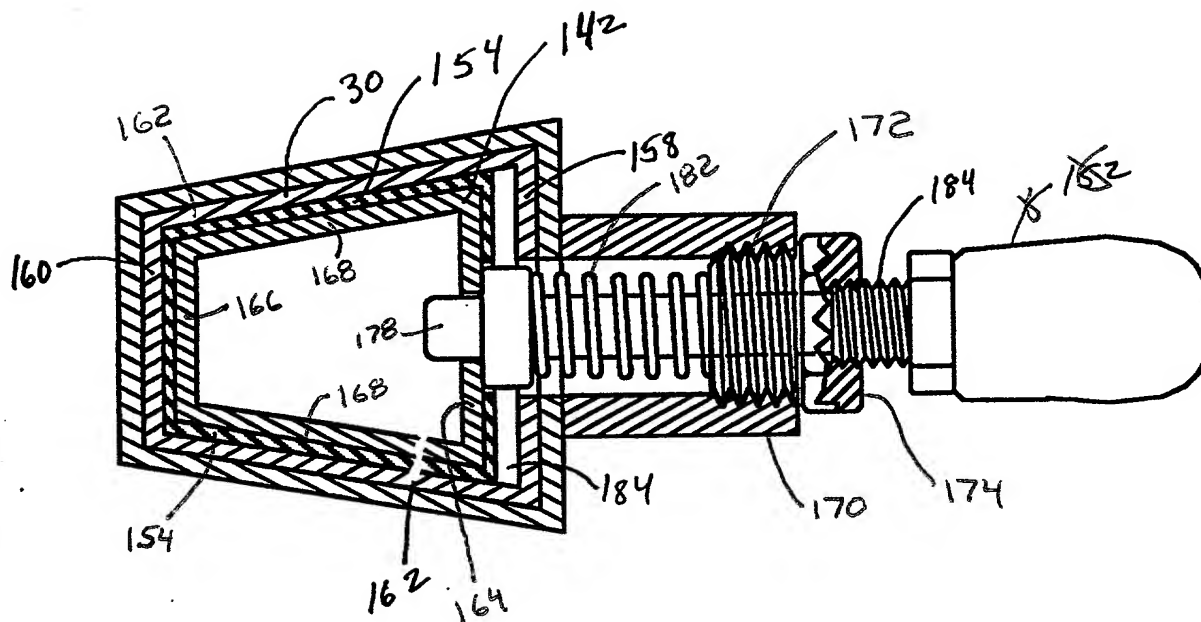


Fig. 8A

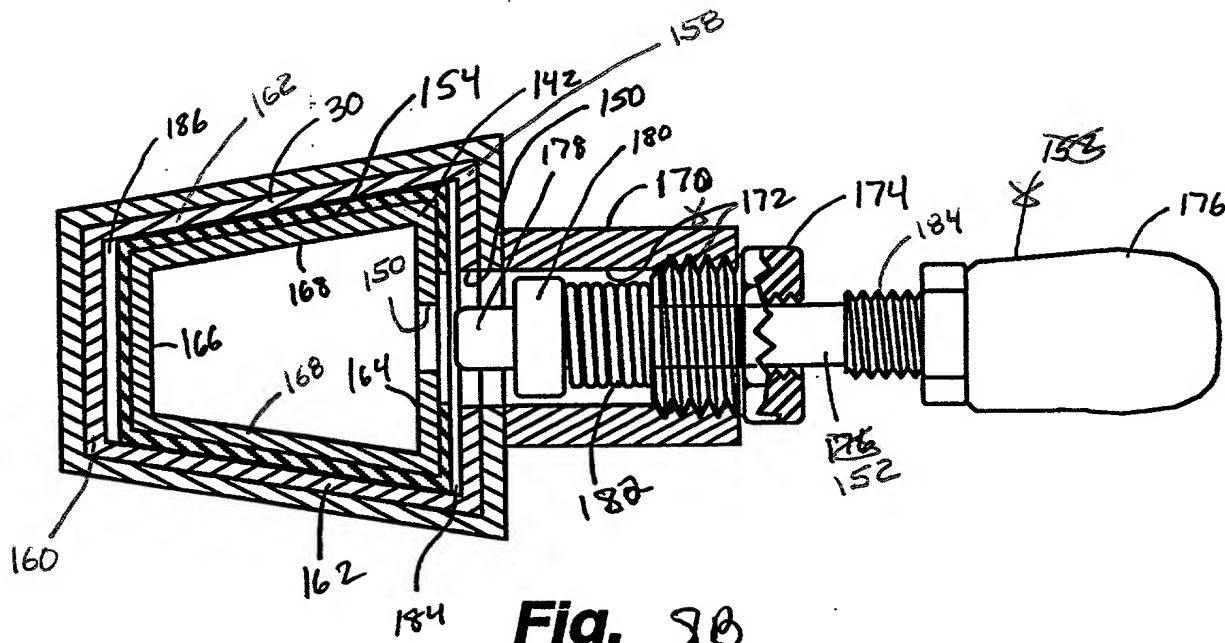


Fig. 8B

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